

## REMARKS

Applicants respectfully request that the above-identified application be re-examined.

Applicants wish to express their appreciation for the courtesy shown by Examiner Issing to applicants' undersigned attorney during a telephone conference on June 14, 2005; the helpful remarks included in the Advisory Action by Examiner Issing in response to the original amendment filed in response to the final Office Action in this application; and the courtesy shown by Examiner Issing in subsequent telephone conversations and voice mail messages. It is the applicants' understanding that the amendments made in this substitute response overcome the cited and applied references and, thus, place this application in condition for allowance.

The final Office Action mailed April 27, 2005 ("Office Action"), rejected Claims 1-14 and 17-45 under 35 U.S.C. § 103(a) as being unpatentable in view of the teachings of U.S. Patent No. 6,546,257 (Stewart) taken in view of the teachings of U.S. Patent Application Publication No. 2001/0037232 (Miller). Claims 46-52 were allowed. Claims 15-16 and Claims 53-58 have been canceled.

While applicants believe that the previously submitted rejected claims were allowable, in order to advance the prosecution of this application, and without prejudice to the filing of a continuation application with the previously submitted rejected and/or other claims, the claims of this application have been amended. The amendments include the amendments made in the originally filed response to the final Office Action and the amendments to Claim 14 set forth in a draft forwarded to Examiner Issing for review on July 26, 2005.

Prior to discussing in more detail the reasons why applicants believe that amended independent Claims 1 and 14 and all the claims dependent therefrom (Claims 2-13 and 17-45) are clearly allowable, a brief description of applicants' invention and a brief description of the teachings of the cited and applied references (Stewart and Miller) are provided. The following discussions of applicants' invention and the cited and applied references are not provided to

LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100

define the scope or interpretation of any of the claims of this application. Instead, these discussions are provided the help the U.S. Patent and Trademark Office better appreciate important claim distinctions discussed thereafter.

#### Applicants' Invention

Applicants' invention is directed to methods, apparatus, and computer-readable media for determining the effectiveness of media displays, such as billboards. The locations of respondent monitoring devices are tracked as a plurality of respondents move along respective paths of travel. The paths of travel of the plurality of respondents are compared with the locations of a plurality of media displays to determine the effectiveness of the media displays.

In one form, applicants' invention is directed to a computer-implemented method of determining the effectiveness of media displays. As noted above, an example of a media display is a billboard. The method comprises storing geo data in a plurality of respondent monitoring devices as the plurality of respondent monitoring devices move along respective paths of travel. At least a portion of the geo data is derived from a satellite positioning system ("SPS"). The stored geo data represents the movement of the plurality of respondent monitoring devices along the respective paths of travel. The stored geo data is downloaded from the plurality of respondent monitoring devices to a post processing server. The post processing server matches the location of a plurality of media displays to positions on the respective paths of travel of the plurality of respondent monitoring devices represented by the geo data. The post processing server also rates the effectiveness of the plurality of media displays based on the matches between the plurality of media display locations and the positions on the respective paths of travel of the plurality of respondent monitoring devices represented by the geo data.

In another form, applicants' invention is directed to a computer-implemented method of determining the effectiveness of media displays (i.e., billboards). The method comprises obtaining geo data specifying a plurality of locations that track the movement of a plurality of

monitoring devices and associated respondents, at least a portion of the geo data being derived from a satellite positioning system ("SPS"). The method further includes storing the geo data in the plurality of monitoring devices and downloading the stored geo data to a post processing server. The post processing server compares the plurality of locations that track the movement of the plurality of monitoring devices with a plurality of media display locations. The post processing server further determines if any of the plurality of monitoring devices were exposed to a media display associated with any of the plurality of media locations based on whether any of the plurality of locations that track the movement of the plurality of monitoring devices and the plurality of media display locations are sufficiently close enough to conclude that the locations match.

Stewart (U.S. Patent No. 6,546,257)

Stewart is directed to a method of providing geographically sensitive promotional information to one or more mobile units, each having a transmitter that can transmit position location information. The method includes receiving from each mobile unit at least one transmission that provides information on multiple locations of the mobile unit over a span of time and an identification of the mobile unit. A repeated travel pattern of the mobile unit is determined based on the multiple locations. From a database of locations, promotional identification or information associated with a location that is within a predetermined position relative to the repeated travel pattern is retrieved. The promotional identification or information is provided to the mobile unit operator's residence, a stationary telephone number or the mobile unit itself.

Stewart is designed to allow merchants to offer special incentives, such as volume discounts, to potential customers. It is designed to invest advertising money to repeatedly target potential customers with advertising in the hope that, over time, they will avail themselves to the merchant's business. Such a customer base has the increased chance of an impulse purchase if

the customers are repeatedly targeted with advertising. Knowing, for example, that an individual commutes to and from work past a coffee shop in the morning allows the individual to be targeted with coffee shop advertising. (Stewart, Col. 1, lines 41-63.)

While Stewart does disclose a plurality of mobile units that track movement and store the tracked movement data for subsequent transmission to a processor, the purpose of the tracking is to detect repeated paths of travel. More specifically, the purpose of Stewart is to detect the repeated path of travel of a single mobile unit and to determine the proximity of the single mobile unit to one or more specific locations. That is, while multiple Stewart mobile units transmit path of travel information, the purpose of the path of travel information is to determine if an individual mobile unit frequently passes a particular location so that advertising information regarding the location can be sent to the operator of the mobile unit. Stewart is not concerned about how the paths of travel of the individual mobile units relate to a specific location, except on a one-on-one basis. Stewart does not determine how many paths of travel pass a particular location. Thus, Stewart does not determine the "effectiveness" of a particular location, much less the effectiveness of a media display at a particular location.

In contrast, the present invention is directed to tracking the movement of a plurality of respondent monitoring devices and comparing the respective travels of the plurality of respondent monitoring devices with a plurality of media display locations to determine the effectiveness of the media display at each location based on matches between the plurality of media display locations and the respective paths of travel of the plurality of respondent monitoring devices. In other words, the present invention is directed to comparing plural paths of travel with plural locations to determine how many respondents are exposed to a media display at each of the plural locations. The purpose of the present invention is not to determine if a particular mobile unit, i.e., a respondent monitoring device, follows a repetitive path of travel

so that advertising associated with merchants located along the path of travel can be sent to the operator of the mobile unit.

While Stewart does appear to disclose downloading geo data from a plurality of mobile units to a post processing server that matches the repetitive paths of travel of the mobile units to specific locations, Stewart does not rate the effectiveness of a plurality of media displays based on matches between a plurality of media display locations and the positions of the respective paths of travel of a plurality of respondent monitoring devices. All Stewart does is determine if a repetitive path of travel of a mobile unit is sufficiently close to a location to justify sending advertising materials in one manner or another to the operator of the mobile unit. Applicants submit that Stewart's provision of advertisement is not a measure of media display effectiveness. All Stewart determines is that a single mobile unit repetitively passes a specific location. Such a determination is not a measure of the effectiveness of the location or media at the location.

Miller (Published Application 2001/0037232)

Miller is directed to a method of tracking advertising effectiveness. The method involves rewarding audience members for viewing and responding to advertisements. Incentive awards are given to audience members who report which advertisements they see. Each time an audience member reports viewing an advertisement, the member is given credits that can be redeemed for something of value. Miller is directed to providing useful feedback to advertisers about the effectiveness of their advertisements. Paragraph 0016 in Col. 2 describes how the Miller method can be used in connection with public advertisements, such as billboards, mobile ads and the like. In order to verify that a viewer has access to such advertisement, Miller provides for determining whether the viewer is present in the vicinity of the advertisement. Miller states this verifying step can, for example, use a global positioning system (GPS) or other locating device to locate the viewer and correlate it with a known location of the advertisement, or can require the viewer to input data, such as quote information, viewable from the public

LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100

advertisement. Other than this reference, Miller appears to have little, if any, relationship to the present invention.

Rejection of Claims 1-14 and 17-45 under 35 U.S.C. § 103(a)

As noted above, Claims 1-14 and 17-45 were rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable in view of the teachings of Stewart taken in view of the teachings of Miller. Applicants respectfully disagree. As amended, Claims 1 and 14 read as follows:

1. A computer-implemented method of determining the effectiveness of media displays, the method comprising:

(a) storing geo data in a plurality of respondent monitoring devices as said plurality of respondent monitoring devices move along respective paths of travel, at least a portion of said geo data derived from a satellite positioning system ("SPS"), said stored geo data representing the movement of said plurality of respondent monitoring devices along said respective paths of travel; and

(b) downloading said geo data stored in said plurality of respondent monitoring devices to a post processing server for:

(i) matching the locations of a **plurality of media displays** to positions on said respective paths of travel of said **plurality of respondent monitoring devices** represented by said geo data; and

(ii) rating the effectiveness of said **plurality of media displays based on said matches between said plurality of media display locations and said positions on said respective paths of travel of said plurality of respondent monitoring devices** represented by said geo data. (Emphasis added)

14. A computer-implemented method of determining the effectiveness of media displays, the method comprising:

(a) obtaining geo data specifying a plurality of locations that track the movement of a plurality of monitoring devices and associated respondents, at least a portion of said geo data derived from a satellite positioning system ("SPS");

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100

(b) storing said geo data in said plurality of monitoring devices; and

(c) downloading said stored geo data to a post processing server for:

(i) comparing said plurality of locations that track the movement of said plurality of monitoring devices with a plurality of media display locations;

(ii) **determining if said plurality of monitoring devices have been exposed to a media display associated with said plurality of media display locations based on whether said plurality of locations that track the movement of said plurality of monitoring devices and said plurality of media display locations are sufficiently close enough to conclude that the locations match; and**

(iii) **determining the effectiveness of said plurality of media display locations based on matches between said plurality of locations that track the movement of said plurality of respondent monitoring devices and said plurality of media display locations.**  
(Emphasis added.)

Remarks accompanying the rejection of Claims 1-14 and 17-45 include the following statement:

. . . . Lastly, applicants argue that Stewart does not rate the effectiveness of the displays utilizing the matches. This is not convincing since the transmission of the promotional information/identification to the mobile unit meets the scope of this limitation. As claimed, the rating of the effectiveness utilizes the matches between the mobile locations and the media locations. Likewise, in Stewart, the comparison of mobile units' locations to a database of media information, the matching of the locations and the subsequent transmission of the media results effectively in rating the effectiveness of the media since a "match" designates the media being effective and a non-match designates the media as not being effective; the transmission of the media provides a further indication of the effectiveness since the media is provided to the mobile unit. In the same manner, the step of determining if a device was exposed to a media display based on whether the monitoring device locations and the media display locations match is met since the result of the comparison in Stewart results in the determination that a transmission of the promotional information to the

mobile unit is an indication that it is exposed to the media display location. . . .

Applicants respectfully disagree. More specifically, applicants disagree that the transmission of promotional information/identification to a mobile unit meets the scope of the Claims 1 and 14 limitations directed to "rating the effectiveness of said plurality of media displays based on said matches between said plurality of media display locations and said positions of said respective paths of travel of said plurality of respondent monitoring devices represented by said geo data" (Claim 1) or "determining if said plurality of monitoring devices have been exposed to a media display associated with said plurality of media display locations based on whether said plurality of locations that track the movement of said plurality of monitoring devices and said plurality of media display locations are sufficiently close enough to conclude that the locations match, and determining the effectiveness of said plurality of media display locations based on matches between said plurality of locations that track the movement of said plurality of respondent monitoring devices and said plurality of media display locations" (Claim 14). All Stewart teaches is that a repeated path of travel of a mobile unit that comes close enough to a particular location triggers the transmission of a promotional identification or promotional information to the operator of the mobile unit. Stewart makes no provision for determining the effectiveness of the location. Stewart does not teach or suggest how information generated by individual mobile units is combinable in any manner to determine the effectiveness of a particular location. Thus, Stewart does not teach or even remotely suggest rating the effectiveness of a plurality of media displays . . . or determining if a plurality of monitoring devices have been exposed to a media display associated with a plurality of media display locations. . . . Nor does Miller teach this subject matter. As a result, applicants' respectfully submit that Claims 1 and 14 and all of the claims dependent therefrom (Claims 2-13 and 17-45) are clearly allowable in view of the teachings of Stewart and Miller taken alone or in combination.

LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>LLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100



Remarks accompanying the statement of Claims 1-14 and 17-45 also include the following statement:

. . . Applicants also argue that the prior art may suggest the determination of the effectiveness of advertising but not of media displays; applicants appear to be reading something additional into the term "media display"; any advertisement provided to a user meets the scope since the advertisement is provided to the user for viewing some form of media. . . .

Frankly, applicants do not understand the relevance of this statement. First, all advertisements do not constitute media displays. More importantly, Stewart discloses providing advertisements after a mobile device has been tracked and a repeated travel pattern determined. Stewart is not directed to determining if the provided advertisements are effective. Stewart is directed to determining if a mobile unit follows a repeated path of travel and if a location is within a predetermined position relative to the repeated path of travel.

Applicants further submit that contrary to the statements set forth in the Office Action, it would not be obvious to combine the teachings of Stewart and Miller. In this regard, the Office Action has failed to establish a *prima facie* case of obviousness. There is no teaching or suggestion in either Smith or Miller to modify either reference or combine their teachings. Nor is there any basis for concluding that they could be combined. Neither of the references suggest the combination, and applicants submit that there is no basis for concluding that it would be obvious to combine the teachings of these references in any manner, much less in the manner recited in Claims 1 and 14. Further, even if combinable, which applicants categorically deny, the resultant combination, as set forth above, would not meet the recitations of Claims 1 and 14. At most, the resultant combination would include a Miller method of verifying information developed by Smith. This combination would not meet the recitation of Claims 1 and 14 described above.

LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100

In summary, applicants respectfully submit that all of the rejected claims remaining in this application (Claims 1-14 and 17-45) are clearly allowable in view of the teaching of these cited and applied references. More specifically, since Claims 1 and 14 are allowable, it is respectfully submitted that the claims dependent therefrom (Claims 2-13 and 17-45), which include all the recitations of Claims 1 and 14, respectively, are also allowable.

Applicants further submit that dependent Claims 2-13 are allowable for reasons in addition to the reasons why Claim 1 is allowable. For example, none of the cited and applied references disclose analyzing geo data to determine if geo data is erroneous, and removing erroneous data from the geo data prior to matching the locations of a plurality of media displays to positions along paths of travel represented by the geo data (Claim 2). Nor do any of the cited and applied references teach rating the effectiveness of media displays by determining the reach and frequency of the media displays (Claim 3), or grooming geo data to enhance accuracy (Claim 6), or grouping the geo data in accordance with the demographics of the respondents (Claim 7). For these and other reasons, applicants respectfully submit that Claims 2-13 are allowable for reasons in addition to the reasons why Claim 1 is allowable.

Applicants also submit that dependent Claims 17-45 are also allowable for reasons in addition to the reasons why independent Claim 14 is allowable. For example, none of the cited and applied references teach grooming of geo data (Claim 25), or the grooming of geo data comprising the processes recited in Claims 26-28. Nor do any of the cited and applied references teach identifying and storing anomalous geo data (Claim 29), or determining confidence rating for monitoring device locations (Claim 30). Clearly, none of the cited and applied references teach or even remotely suggest the subject matter of Claims 35-40. Consequently, as noted above, applicants respectfully submit that dependent Claims 17-45 are allowable for reasons in addition to the reasons why Claim 14 is allowable.

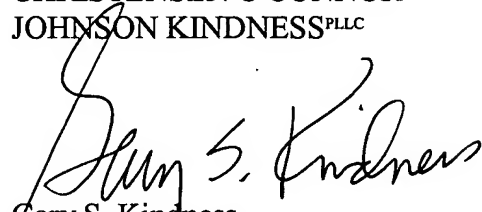
Conclusion

For the reasons set forth above, applicants respectfully submit that all of the rejected claims remaining in this application are clearly allowable in view of the cited and applied references. As a result, early and favorable action allowing these claims and passing this application to issue is respectfully solicited.

If the Examiner has any questions, he is invited to contact applicants' attorney at the number set forth below.

Respectfully submitted,

CHRISTENSEN O'CONNOR  
JOHNSON KINDNESS<sup>PLLC</sup>

  
Gary S. Kindness  
Registration No. 22,178  
Direct Dial No. 206.695.1702

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LAW OFFICES OF  
CHRISTENSEN O'CONNOR JOHNSON KINDNESS<sup>PLLC</sup>  
1420 Fifth Avenue  
Suite 2800  
Seattle, Washington 98101  
206.682.8100